SECTION 5

Technical Guide to the June 2014 MACStats

This section provides supplemental information to accompany the tables and figures in Sections 1–4 of MACStats. It describes some of the data sources used in MACStats, the methods that MACPAC uses to analyze these data, and reasons why numbers in MACStats tables and figures—such as those on enrollment and spending—may differ from each other or from those published elsewhere.

Interpreting Medicaid and CHIP Enrollment and Spending Numbers

Previous MACPAC reports have discussed reasons why estimates of Medicaid and State Children's Health Insurance Program (CHIP) enrollment and spending may vary.[1] Here, Tables 16–19 are used to illustrate how various factors can affect enrollment numbers. Table 16 shows enrollment numbers for the entire U.S. population in 2011.[2] Tables 17–19 divide the U.S. population into the three age groups that are commonly used in MACPAC analyses because they correspond to some of the key eligibility pathways in Medicaid and CHIP: children age 0 to 18; adults age 19 to 64; and adults age 65 and older.

Data sources

Medicaid and CHIP enrollment and spending numbers are available from administrative data, which states and the federal government compile in the course of administering these programs. The latest year of available data may differ, depending on the source. The administrative data used in this edition of MACStats include the following, which are submitted by the states to the Centers for Medicare & Medicaid Services (CMS):

- Form CMS-64 data for state-level Medicaid spending, which is used throughout MACStats;

- Medicaid Statistical Information System (MSIS) data for person-level detail, which is used throughout MACStats;[3]
- Medicaid managed care enrollment reports, which are used in previous editions of MACStats; and
- Statistical Enrollment Data System (SEDS) data for CHIP enrollment, used in Tables 16–19.

Additional information is available from nationally representative surveys based on interviews of individuals. The survey data used in Tables 2–10 are from the federal National Health Interview Survey (NHIS), which is described below in more detail.

Tables 16–19 show 2011 survey-based estimates of Medicaid/CHIP enrollment as well as comparable (point-in-time) estimates from the administrative data. Estimates of Medicaid/CHIP enrollment from survey data tend to be lower than numbers from administrative data because survey respondents tend to underreport Medicaid and CHIP, among other reasons described later in this section.

Enrollment period examined

The number of individuals enrolled at a particular point during the year will be lower than the total number enrolled at any point during an entire year. For example, the administrative data in Table 17 show that 51.3 percent of children (40.3 million) were enrolled in Medicaid or CHIP at some time during fiscal year (FY) 2011. However, numbers from the same data source illustrate that the number of children enrolled at a particular point in time (32.4 million, or approximately 41.3 percent of children) is much smaller than the number ever enrolled during the year.

Point-in-time data may also be referred to as average monthly enrollment or full-year equivalent enrollment.[4] Full-year equivalent enrollment is often used for budget analyses (such as those by the CMS Office of the Actuary) and when comparing enrollment and expenditure numbers (such as in Figure 1). Per enrollee spending levels based on full-year equivalents (Table 13) ensure that amounts are not biased by individuals' transitions in and out of Medicaid coverage during the year.

Enrollees versus beneficiaries

Depending on the source and the year in question, data may include slightly different numbers of individuals in Medicaid. Certain terms commonly used to refer to people with Medicaid have very specific definitions in administrative data sources provided by CMS:[5]

- Enrollees (less commonly referred to as eligibles) are individuals who are eligible for and enrolled in Medicaid or CHIP. Prior to FY 1990, CMS did not track the number of Medicaid enrollees, only beneficiaries. For some historical numbers, CMS has estimated the number of enrollees prior to FY 1990 (Figure 1).
- Beneficiaries or persons served (less commonly referred to as recipients) are enrollees who receive covered services or for whom Medicaid or CHIP payments are made. Prior to FY 1998, individuals were not counted as beneficiaries if managed care payments were the only Medicaid payments made on their behalf. Beginning in FY 1998, however, Medicaid managed care enrollees with no fee-for-service (FFS) spending were also counted as beneficiaries, which had a large impact on the numbers (Table 1).[6]

The following example illustrates the difference in these terms. In FY 2011, there were 32 million non-disabled child Medicaid enrollees (Table 11). However, there were 30.2 million beneficiaries in this eligibility group—that is, during FY 2011, a Medicaid FFS or managed care capitation payment

was made on their behalf (Table 1).[7] Generally, the number of beneficiaries will approach the number of enrollees as more of these individuals use Medicaid-covered services or are enrolled in managed care.

Institutionalized and limited-benefit enrollees

Administrative Medicaid data include enrollees who were in institutions such as nursing homes, as well as individuals who received only limited benefits (for example, only coverage for emergency services). Survey data tend to exclude such individuals from counts of coverage; the NHIS estimates in Tables 2–10 do not include the institutionalized.

Table 19 shows point-in-time enrollment among those age 65 and older—5.6 million from the administrative data and 3.1 million from the survey data (NHIS). In percentage terms, the difference between the administrative data and the survey data is largest for this age group. This is primarily because the NHIS excludes the institutionalized and because, when Medicaid pays only for Medicare enrollees' cost sharing, the NHIS generally does not count it as Medicaid coverage. Based on administrative data, 1.6 million Medicaid enrollees age 65 and older received only limited benefits from Medicaid.

State Children's Health Insurance Program Enrollees

Medicaid-expansion CHIP enrollees are children who are entitled to the covered services of a state's Medicaid program, but whose Medicaid coverage is generally funded with CHIP dollars. Depending on the data source, Medicaid enrollment and spending figures may include both Medicaid enrollees funded with Medicaid dollars and Medicaid-expansion CHIP enrollees funded with CHIP dollars. We generally exclude Medicaid-expansion CHIP enrollees from Medicaid analyses where possible in MACStats, but in some cases data sources do not allow these children to be broken out separately.

Methodology for Adjusting Benefit Spending Data

The FY 2011 Medicaid benefit spending amounts shown in the June 2014 MACStats were calculated based on MSIS data that have been adjusted to match total benefit spending reported by states in CMS-64 data.[8] Although the CMS-64 provides a more complete accounting of spending and is preferred when examining state or federal spending totals, MSIS is the only data source that allows for analysis of benefit spending by eligibility group and other enrollee characteristics.[9] We adjust the MSIS amounts for several reasons:

- CMS-64 data provide an official accounting of state spending on Medicaid for purposes of receiving federal matching dollars; in contrast, MSIS data are used primarily for statistical purposes.
- MSIS generally understates total Medicaid benefit spending because it excludes disproportionate share hospital payments and additional types of supplemental payments made to hospitals and other providers, Medicare premium payments, and certain other amounts.[10]
- MSIS generally overstates net spending on prescribed drugs because it excludes rebates from drug manufacturers.
- Even after accounting for differences in their scope and design, MSIS still tends to produce lower total benefit spending than the CMS-64.[11]
- The extent to which MSIS differs from the CMS-64 varies by state, meaning that a cross-state comparison of unadjusted MSIS amounts

may not reflect true differences in benefit spending. See Table 20 for unadjusted benefit spending amounts in MSIS as a percentage of benefit spending in the CMS-64.

The methodology MACPAC uses for adjusting the MSIS benefit spending data involves the following steps:

- MACPAC aggregates the service types into broad categories that are comparable between the two sources. This is necessary because there is not a one-to-one correspondence of service types in the MSIS and CMS-64 data. Even service types that have identical names may still be reported differently in the two sources due to differences in the instructions given to states. Table 21 provides additional detail on the categories used.
- MACPAC calculates state-specific adjustment factors for each of the service categories by dividing CMS-64 benefit spending by MSIS benefit spending.
- MACPAC then multiplies MSIS dollar amounts in each service category by the state-specific factors to obtain adjusted MSIS spending. For example, in a state with a FFS hospital factor of 1.2, each Medicaid enrollee with hospital spending in MSIS would have that spending multiplied by 1.2; doing so makes the sum of adjusted hospital spending amounts among individual Medicaid enrollees in MSIS total the aggregate hospital spending reported by states in the CMS-64.[12]

By making these adjustments to the MSIS data, MACPAC attempts to provide more complete estimates of Medicaid benefit spending across states that can be analyzed by eligibility group and other enrollee characteristics. Other organizations, including the Office of the Actuary at CMS, the Kaiser Commission on Medicaid and the Uninsured, and the Urban Institute use methodologies that are similar to MACPAC's but may differ in various ways—for example, by using different service categories or producing estimates for future years based on actual data for earlier years.

Readers should note that due to changes in both methods and data, the MSIS figures shown in this edition of MACStats are not directly comparable to earlier years. Key differences between the current and previous methodologies include:

- The exclusion of disproportionate share hospital (DSH) payments from CMS-64 totals used to adjust MSIS spending. In previous editions of MACStats, DSH payments were included in the CMS-64 totals. This was due in part to the fact that DSH payments are used to support hospitals that serve a large number of low-income and Medicaid patients, and could therefore be partially attributed to Medicaid enrollees in MSIS. However, an examination of annual DSH report data submitted by states indicates that for some hospitals, Medicaid DSH payments far exceed their uncompensated care costs for Medicaid patients and may therefore be attributed largely to uninsured patients.[13] As a result, we now exclude DSH payments from CMS-64 totals when we adjust MSIS spending.
- A more precise separation of home and community-based (HCBS) waiver spending in MSIS. As described later in this section, this edition of MACStats uses more detailed MSIS data files than in previous years.

With regard to changes in data, MSIS Annual Person Summary (APS) files—which are created by CMS and are typically used in MACStats—for FY 2011 were unavailable for many states when MACPAC's 2014 reports to Congress were completed. As a result, MACPAC calculated spending and enrollment from the full MSIS

data files that are used to create the APS files. In general, our calculations closely match those used to create the APS. However, our development of enrollment counts is a notable exception. In MACPAC's analysis of the full MSIS data files, Medicaid enrollees were assigned a unique national identification (ID) number using an algorithm that incorporates state-specific ID numbers and beneficiary characteristics such as date of birth and gender. The state and national enrollment counts were then unduplicated using this national ID, which results in slightly lower enrollment counts as compared to the APS files.

Understanding Data on Health and Other Characteristics of Medicaid/CHIP Populations

Section 2 of MACStats, which encompasses Tables 2–10, uses data from the federal National Health Interview Survey to describe Medicaid and CHIP enrollees in terms of their self-reported demographic, socioeconomic, and health characteristics as well as their use of care. Background information on the NHIS is provided here, along with information on how children with special health care needs are identified in Tables 2–4 using this data source.

National Health Interview Survey data

Every year, thousands of non-institutionalized Americans are interviewed about their health insurance and health status for the NHIS.[14] Individuals' responses to the NHIS questions are the basis for the results in Tables 2–10. The NHIS is an annual face-to-face household survey of civilian non-institutionalized persons designed to monitor the health of the U.S. population through the collection of information on a broad range of health topics.[15] Administered by the National Center for Health Statistics within the Centers for Disease Control and Prevention, the NHIS consists of a nationally representative sample from approximately 35,000 households containing about 87,500 people.[16] Tables 2–10 are based on NHIS data, pooling the years 2010 through 2012.[17] Although there are other federal surveys, the NHIS is used here because it is generally considered to be one of the best surveys for health insurance coverage estimates, and it captures detailed information on individuals' health status.[18]

As with most surveys, information about participation in programs such as Medicaid, CHIP, Medicare, Supplemental Security Income (SSI), and Social Security Disability Insurance (SSDI) may not be accurately reported by respondents in the NHIS. As a result, they may not match estimates of program participation computed from the programs' administrative data. In addition, although the NHIS asks separately about participation in Medicaid and CHIP, estimates for the programs are not produced separately from the survey data for several reasons. For example, many states' CHIP and Medicaid programs use the same name, so respondents would not necessarily know whether their children's coverage was funded by Medicaid or CHIP. The separate survey questions are used to reduce surveys' undercount of Medicaid and CHIP enrollees, not to produce valid estimates separately for each program. Thus, survey estimates generally combine Medicaid and CHIP into a single category, as is done in Section 2 of MACStats.

Children with special health care needs

Tables 2–4 in MACStats present figures for children with special health care needs (CSHCN) who are enrolled in Medicaid or CHIP. As described here, MACPAC uses NHIS data to

construct a CSHCN indicator based on responses to a number of questions contained in the survey.

CSHCN are defined by the Maternal and Child Health Bureau (MCHB) within the Health Resources and Services Administration as a group of children who "have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."[19] This definition is used by all states for policy and program planning purposes for CSHCN and encompasses children with disabilities and also children with chronic conditions (e.g., asthma, juvenile diabetes, sickle cell anemia) that range from mild to severe. Children with special health care needs are a broader group than children with conditions severe enough and family incomes so low as to qualify for SSI.[20] Table 2 shows that only 3.3 percent of children with Medicaid or CHIP receive SSI.

To operationalize the MCHB definition of CSHCN, researchers developed a set of survey questions referred to as the CSHCN Screener.[21] The CSHCN Screener is currently used in several national surveys, but not the NHIS. It incorporates four components of the definition of CSHCN considered by researchers as essential: functional limitations, need for health-related services, presence of a health condition, and minimum expected duration of health condition (e.g., 12 months).[22]

It should be noted that CSHCN can vary substantially in their health status and use of health care services. A CSHCN could be a child with intensive health care needs and high health care expenses who has severe functional limitations (e.g., spina bifida, paralysis) and would qualify for SSI if his or her family income were low enough.[23] On the other hand, a CSHCN could also be a child who has asthma, attention deficit disorder, or depression that is well managed through the use of prescription medications. Regardless of whether functional limitations are mild, moderate, or severe, however, CSHCN share a heightened need for health care services in order to maintain their health and to be able to function appropriately for their age.

Since the NHIS does not include the validated CSHCN Screener, MACPAC's analysis is based on an alternative approach developed by the Child and Adolescent Health Measurement Initiative (CAHMI 2012), specifically for use in the 2007 NHIS, and on other prior research.[24] The CAHMI definition of CSHCN (CAHMI uses the term "children with chronic conditions and elevated service use or need–CCCESUN") includes children with at least one diagnosed or parent-reported condition expected to be an ongoing health condition, and who also meet at least one of five criteria related to elevated service use or elevated need:

- is limited or prevented in his or her ability to do things most children of the same age can do;
- needs or uses medications prescribed by a doctor (other than vitamins);
- needs or uses specialized therapies such as physical, occupational, or speech therapy;
- has above-routine need or use of medical, mental health, home care, or education services; or
- needs or receives treatment or counseling for an emotional, behavioral, or developmental problem.[25]

The NHIS varies from year to year in the diagnoses and health conditions that parents are asked about, so establishing a consistent definition across the 2010–2012 NHIS data in this analysis required modifying the survey items used in the CAHMI construct of CSHCN. Estimates for CSHCN in this analysis are not directly comparable to those in MACPAC reports prior to 2013 because the

definition of CSHCN used in the 2013 and 2014 reports differs slightly from earlier versions.[26]

Understanding Managed Care Enrollment and Spending Data

There are four main sources of data on Medicaid managed care available from CMS.

- **Medicaid Managed Care Data Collection System (MMCDCS).** The MMCDCS provides state-reported aggregate enrollment statistics and other basic information for each managed care plan within a state. CMS uses the MMCDCS to create an annual Medicaid managed care enrollment report, which is the source of information on Medicaid managed care most commonly cited by CMS, as well as by outside analysts and researchers.[27] CMS also uses the MMCDCS to produce an annual summary of state Medicaid managed care programs that describes the managed care programs within a state (generally defined by the statutory authority under which they operate), each of which may include several managed care plans.[28]

- **Medicaid Statistical Information System (MSIS).** The MSIS provides person-level and claims-level information for all Medicaid enrollees.[29] With regard to managed care, the information collected for each enrollee includes: (1) plan ID numbers and types for up to four managed care plans (including comprehensive risk-based plans, primary care case management programs, and limited-benefit plans) under which the enrollee is covered, (2) the waiver ID number, if enrolled in a 1915(b) or other waiver, (3) claims that provide a record of each capitated payment made on behalf of the enrollee to a managed care plan (generally referred to as capitated claims), and (4) in some states, a record of each service received by the enrollee from a provider under contract with a managed care plan (which generally do not include a payment amount and are referred to as encounter or "dummy" claims). All states collect encounter data from their Medicaid managed care plans, but some do not report them in MSIS. Managed care enrollees may also have FFS claims in MSIS if they used services that were not included in their managed care plan's contract with the state.

- **CMS-64.** The CMS-64 provides aggregate spending information for Medicaid by major benefit categories, including managed care. The spending amounts reported by states on the CMS-64 are used to calculate their federal matching dollars.

- **Statistical Enrollment Data System (SEDS).** The SEDS provides aggregate statistics on CHIP enrollment and child Medicaid enrollment that include the number covered under FFS and managed care systems. SEDS is the only comprehensive source of information on managed care participation among separate CHIP enrollees across states.

CMS's FY 2012 Medicaid managed care enrollment report was unavailable when MACPAC's June 2014 report to the Congress was completed. Although the enrollment report generally contains the most recent information available from CMS on Medicaid managed care for all states, it does not provide information on characteristics of enrollees in managed care aside from dual eligibility for Medicare (e.g., basis of eligibility and demographics such as age, sex, race, and ethnicity). As a result, we supplement statistics from the enrollment report with MSIS and CMS-64 data; for example, Tables 14 and 15 use MSIS data to show the percentage of various populations in managed care and the percentage of their Medicaid benefit spending accounted for by managed care.

When examining managed care statistics from various sources, the following issues should be noted:

- Figures in the annual Medicaid managed care enrollment report published by CMS include Medicaid-expansion CHIP enrollees. Although we generally exclude these children (about 2 million, depending on the time period) from Medicaid analyses, it is not possible to do so with the CMS's annual Medicaid managed care enrollment report data. Tables 14 and 15—which show the percentage of child, adult, disabled, aged, and dually eligible enrollees who are enrolled in Medicaid managed care and the percentage of their Medicaid benefit spending that was for managed care—are based on MSIS data and exclude Medicaid-expansion CHIP enrollees.[30]

- The types of managed care reported by states may differ somewhat between the Medicaid managed care enrollment report and the MSIS. For example, some states report a small number of enrollees in comprehensive risk-based managed care in one data source but not the other. Anomalies in the MSIS data are documented by CMS as it reviews each state's quarterly submission, but not all issues may be identified in this process.[31]

- The Medicaid managed care enrollment report provides point-in-time figures (e.g., as of July 1, 2012). In contrast, CMS generally uses MSIS to report on the number of enrollees ever in managed care during a fiscal year (although point-in-time enrollment can also be calculated from MSIS based on the monthly data it contains).

TABLE 16. Medicaid and CHIP Enrollment by Data Source and Enrollment Period, 2011

Medicaid and CHIP Enrollment (All Ages)	Administrative Data		Survey Data (NHIS)
	Ever enrolled during the year	Point in time	Point in time
Medicaid	67.6 million	55.0 million	Not available
CHIP	8.2 million	5.5 million	Not available
Totals for Medicaid and CHIP	75.8 million	60.4 million	50.5 million
U.S. Population	**Census Bureau**		**Survey Data (NHIS)**
	312.3 million	311.0 million	305.9 million, excluding active-duty military and individuals in institutions
Medicaid and CHIP Enrollment as a Percentage of U.S. Population			
	24.3%	19.4%	16.5%

See Table 19 for notes.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) data as of February 2014, CHIP Statistical Enrollment Data System (SEDS) data as of May 2014, data from the National Health Interview Survey (NHIS), and U.S. Census Bureau vintage 2012 data on the monthly postcensal resident population by single year of age, sex, race, and Hispanic origin.

TABLE 17. Medicaid and CHIP Enrollment by Data Source and Enrollment Period Among Children Under Age 19, 2011

Medicaid and CHIP Enrollment Among Children Under Age 19	Administrative Data		Survey Data (NHIS)
	Ever enrolled during the year	Point in time	Point in time
Medicaid	32.3 million	27.1 million	Not available
CHIP	7.9 million	5.3 million	Not available
Totals for Medicaid and CHIP	40.3 million	32.4 million	29.5 million
Children Under Age 19	**Census Bureau**		**Survey Data (NHIS)**
	78.5 million	78.4 million	78.7 million, excluding active-duty military and individuals in institutions
Medicaid and CHIP Enrollment as a Percentage of All Children			
	51.3%	41.3%	37.5%

See Table 19 for notes.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) data as of February 2014, CHIP Statistical Enrollment Data System (SEDS) data as of May 2014, data from the National Health Interview Survey (NHIS), and U.S. Census Bureau vintage 2012 data on the monthly postcensal resident population by single year of age, sex, race, and Hispanic origin.

TABLE 18. Medicaid and CHIP Enrollment by Data Source and Enrollment Period Among Adults Age 19–64, 2011

Medicaid and CHIP Enrollment Among Adults Age 19–64	Administrative Data		Survey Data (NHIS)
	Ever enrolled during the year	Point in time	Point in time
Medicaid	28.8 million	22.2 million	Not available
CHIP	0.2 million	0.2 million	Not available
Totals for Medicaid and CHIP	29.0 million	22.4 million	17.8 million
Adults Age 19–64	**Census Bureau**		**Survey Data (NHIS)**
	192.1 million	191.4 million	187.4 million, excluding active-duty military and individuals in institutions
Medicaid and CHIP Enrollment as a Percentage of All Adults Age 19–64			
	15.1%	11.7%	9.5%

See Table 19 for notes.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) data as of February 2014, CHIP Statistical Enrollment Data System (SEDS) data as of May 2014, data from the National Health Interview Survey (NHIS), and U.S. Census Bureau vintage 2012 data on the monthly postcensal resident population by single year of age, sex, race, and Hispanic origin.

TABLE 19. Medicaid and CHIP Enrollment by Data Source and Enrollment Period Among Adults Age 65 and Older, 2011

Medicaid and CHIP Enrollment Among Adults Age 65 and Older	Administrative Data		Survey Data (NHIS)
	Ever enrolled during the year	Point in time	Point in time
Medicaid	6.5 million	5.6 million	Not available
CHIP	–	–	Not available
Totals for Medicaid and CHIP	6.5 million	5.6 million	3.1 million
Adults Age 65 and Older	**Census Bureau**		**Survey Data (NHIS)**
	41.7 million	41.1 million	39.7 million, excluding active-duty military and individuals in institutions
Medicaid and CHIP Enrollment as a Percentage of All Adults Age 65 and Older			
	15.5%	13.7%	7.9%

Notes: Excludes U.S. territories. Medicaid enrollment numbers obtained from administrative data include 8.8 million individuals ever enrolled during the year who received limited benefits (e.g., emergency services only, Medicaid payment only for Medicare enrollees' cost sharing), of whom 0.5 million were under age 19, 6.7 million were age 19 to 64, and 1.6 million were age 65 or older. In the event individuals were reported to be in both Medicaid and CHIP during the year, individuals were counted only once in the administrative data based on their most recent source of coverage. Overcounting of enrollees in the administrative data may occur because individuals may move and be enrolled in two states' Medicaid or CHIP programs during the year; however, Medicaid enrollment counts shown here are unduplicated using unique national identification (ID) numbers. The National Health Interview Survey (NHIS) excludes individuals in institutions (such as nursing homes) and active-duty military; in addition, surveys such as NHIS generally do not count limited benefits as Medicaid/CHIP coverage. Administrative data and Census Bureau data are for FY 2011 (October 2010 through September 2011); the NHIS data are for sources of insurance at the time of the survey in calendar year 2011. The Census Bureau number in the ever-enrolled column was the estimated U.S. resident population in the month in FY 2011 with the largest count; the number of residents ever living in the United States during the year is not available. The Census Bureau point-in-time number is the average estimated monthly number of U.S. residents for FY 2011.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) data as of February 2014, CHIP Statistical Enrollment Data System (SEDS) data as of May 2014, data from the National Health Interview Survey (NHIS), and U.S. Census Bureau vintage 2012 data on the monthly postcensal resident population by single year of age, sex, race, and Hispanic origin.

TABLE 20. Medicaid Benefit Spending in MSIS and CMS-64 Data by State, FY 2011 (billions)

State	Excluding DSH from CMS-64 Total			Including DSH in CMS-64 Total		
	MSIS	CMS-64	MSIS as a percentage of CMS-64	MSIS	CMS-64	MSIS as a percentage of CMS-64
Total[1]	**$352.5**	**$386.4**	**91.2**	**$352.5**	**$403.5**	**87.4**
Alabama	4.2	4.4	94.7	4.2	4.9	86.0
Alaska	1.3	1.3	98.4	1.3	1.3	97.3
Arizona	9.4	8.8	107.0	9.4	9.0	105.0
Arkansas	3.5	3.9	89.8	3.5	4.0	88.4
California	37.2	52.6	70.8	37.2	54.9	67.8
Colorado	3.5	4.2	82.9	3.5	4.4	79.4
Connecticut	5.8	5.8	99.9	5.8	6.0	96.6
Delaware	1.5	1.4	105.2	1.5	1.4	104.8
District of Columbia	2.1	2.1	102.2	2.1	2.1	98.7
Florida	19.3	17.9	107.7	19.3	18.3	105.7
Georgia	8.4	7.7	108.8	8.4	8.1	103.3
Hawaii	1.4	1.6	89.0	1.4	1.6	87.9
Idaho	1.4	1.5	94.1	1.4	1.5	92.6
Illinois	11.7	12.6	93.3	11.7	13.0	90.3
Indiana	5.7	6.3	90.2	5.7	6.6	85.8
Iowa	3.2	3.3	98.2	3.2	3.4	95.8
Kansas	2.7	2.6	102.3	2.7	2.7	99.6
Kentucky	5.5	5.5	99.8	5.5	5.7	96.2
Louisiana	5.3	6.1	87.4	5.3	6.7	79.5
Maine	[1]	[1]	[1]	[1]	[1]	[1]
Maryland	7.0	7.4	94.6	7.0	7.5	93.5
Massachusetts	11.1	13.2	84.0	11.1	13.2	84.0
Michigan	11.6	11.8	98.8	11.6	12.1	95.7
Minnesota	7.9	8.3	95.3	7.9	8.4	94.3
Mississippi	3.7	4.3	86.3	3.7	4.5	82.3
Missouri	6.2	7.4	83.5	6.2	8.1	76.3
Montana	0.8	0.9	82.9	0.8	1.0	81.4
Nebraska	1.5	1.6	94.3	1.5	1.7	92.2
Nevada	1.4	1.5	93.9	1.4	1.6	88.7
New Hampshire	1.0	1.2	84.8	1.0	1.4	75.6
New Jersey	8.3	9.3	89.1	8.3	10.6	78.4
New Mexico	2.6	3.4	75.9	2.6	3.4	75.2
New York	51.2	50.7	100.9	51.2	53.9	95.0
North Carolina	9.5	10.1	94.1	9.5	10.5	90.4
North Dakota	0.7	0.7	102.7	0.7	0.7	102.4
Ohio	15.4	15.0	102.3	15.4	15.7	98.0
Oklahoma	3.6	4.2	86.3	3.6	4.3	85.4
Oregon	3.6	4.4	81.8	3.6	4.4	80.8
Pennsylvania	17.7	19.7	90.0	17.7	20.5	86.2
Rhode Island	1.5	2.0	76.0	1.5	2.1	71.5
South Carolina	5.0	4.6	109.4	5.0	5.1	98.1
South Dakota	0.7	0.8	98.3	0.7	0.8	98.2
Tennessee	[1]	[1]	[1]	[1]	[1]	[1]
Texas	22.4	27.0	83.1	22.4	28.6	78.5
Utah	2.1	1.7	120.0	2.1	1.8	118.4
Vermont	1.1	1.3	83.3	1.1	1.3	80.9
Virginia	6.1	6.8	89.0	6.1	7.0	86.5
Washington	6.3	7.1	88.3	6.3	7.4	84.2
West Virginia	2.9	2.7	109.0	2.9	2.8	106.1
Wisconsin	5.6	7.0	80.8	5.6	7.0	80.8
Wyoming	0.6	0.5	108.1	0.6	0.5	107.9

Notes: See text for a discussion of differences between Medicaid Statistical Information System (MSIS) and CMS-64 data. Both sources reflect unadjusted amounts as reported by states. Includes federal and state funds. Both sources exclude spending on administration, the territories, and Medicaid-expansion CHIP enrollees; in addition, the CMS-64 amounts exclude $7.4 billion (excluding Maine and Tennessee) in offsetting collections from third-party liability, estate, and other recoveries. In previous editions of MACStats, disproportionate share hospital (DSH) payments were included in the CMS-64 totals used to adjust MSIS spending. However, as described in the text of this section, we now exclude DSH payments from the CMS-64 totals when we adjust MSIS spending. For comparison purposes, MSIS spending as a percentage of the CMS-64 is shown here including and excluding DSH payments.

1 Maine ($2.4 billion in CMS-64 spending with DSH, $2.3 billion without) and Tennessee ($8.0 billion in CMS-64 spending with DSH, $7.9 billion without) were excluded due to MSIS spending data anomalies.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) spending data and CMS-64 Financial Management Report (FMR) net expenditure data as of February 2014.

TABLE 21. Service Categories Used to Adjust FY 2011 Medicaid Benefit Spending in MSIS to Match CMS-64 Totals

Service Category	MSIS Service Types[1]	CMS-64 Service Types
Hospital	▶ Inpatient hospital ▶ Outpatient hospital	▶ Inpatient hospital non-DSH ▶ Inpatient hospital non-DSH supplemental payments ▶ Inpatient hospital GME payments ▶ Outpatient hospital non-DSH ▶ Outpatient hospital non-DSH supplemental payments ▶ Emergency services for aliens[2] ▶ Emergency hospital services ▶ Critical access hospitals
Non-hospital acute care	▶ Physician ▶ Dental ▶ Nurse midwife ▶ Nurse practitioner ▶ Other practitioner ▶ Non-hospital outpatient clinic ▶ Lab and X-ray ▶ Sterilizations ▶ Abortions ▶ Hospice ▶ Targeted case management ▶ Physical, occupational, speech, and hearing therapy ▶ Non-emergency transportation ▶ Private duty nursing ▶ Rehabilitative services ▶ Other care, excluding HCBS waiver	▶ Physician ▶ Physician services supplemental payments ▶ Dental ▶ Nurse midwife ▶ Nurse practitioner ▶ Other practitioner ▶ Other practitioner supplemental payments ▶ Non-hospital clinic ▶ Rural health clinic ▶ Federally qualified health center ▶ Lab and X-ray ▶ Sterilizations ▶ Abortions ▶ Hospice ▶ Targeted case management ▶ Statewide case management ▶ Physical therapy ▶ Occupational therapy ▶ Services for speech, hearing, and language ▶ Non-emergency transportation ▶ Private duty nursing ▶ Rehabilitative services (non-school-based) ▶ School-based services ▶ EPSDT screenings ▶ Diagnostic screening and preventive services ▶ Prosthetic devices, dentures, eyeglasses ▶ Freestanding birth center ▶ Health home with chronic conditions ▶ Tobacco cessation for pregnant women ▶ Care not otherwise categorized
Drugs	▶ Drugs (gross spending)	▶ Drugs (gross spending) ▶ Drug rebates

TABLE 21, Continued

Service Category	MSIS Service Types[1]	CMS-64 Service Types
Managed care and premium assistance	▶ HMO (i.e., comprehensive risk-based managed care; includes PACE) ▶ PHP ▶ PCCM	▶ MCO (i.e., comprehensive risk-based managed care) ▶ MCO drug rebates ▶ PACE ▶ PAHP ▶ PIHP ▶ PCCM ▶ Premium assistance for private coverage
LTSS non-institutional	▶ Home health ▶ Personal care ▶ HCBS waiver	▶ Home health ▶ Personal care ▶ Personal care – 1915(j) ▶ HCBS waiver ▶ HCBS – 1915(i) ▶ HCBS – 1915(j)
LTSS institutional	▶ Nursing facility ▶ ICF/ID ▶ Inpatient psychiatric for individuals under age 21 ▶ Mental health facility for individuals age 65 and older	▶ Nursing facility ▶ Nursing facility supplemental payments ▶ ICF/ID ▶ ICF/ID supplemental payments ▶ Mental health facility for under age 21 or age 65+ non-DSH
Medicare[3, 4]		▶ Medicare Part A and Part B premiums ▶ Medicare coinsurance and deductibles for QMBs

Notes: DSH is disproportionate share hospital; EPSDT is Early and Periodic Screening, Diagnostic, and Treatment; GME is graduate medical education; HCBS is home and community-based services; HMO is health maintenance organization; ICF/ID is intermediate care facility for persons with intellectual disabilities; LTSS is long-term services and supports; MCO is managed care organization; MSIS is Medicaid Statistical Information System; PACE is Program of All-inclusive Care for the Elderly; PAHP is prepaid ambulatory health plan; PIHP is prepaid inpatient health plan; PHP is prepaid health plan, either a PAHP or a PIHP; PCCM is primary care case management; QMB is qualified Medicare beneficiary.

Service categories and types reflect fee-for-service spending unless noted otherwise. Service types with identical names in MSIS and CMS-64 data may still be reported differently in the two sources due to differences in the instructions given to states; amounts for those that appear only in the CMS-64 (e.g., drug rebates) are distributed across Medicaid enrollees with MSIS spending in the relevant service categories (e.g., drugs).

1 Claims in MSIS include both a service type (such as inpatient hospital, physician, personal care, etc.) and a program type (including HCBS waiver). When adjusting MSIS data to match CMS-64 totals, we count all claims with an HCBS waiver program type as HCBS waiver, regardless of their specific service type. Among claims with an HCBS waiver program type, the most common service types are other, home health, rehabilitation, and personal care.

2 Emergency services for aliens are reported under individual service types throughout MSIS, but primarily inpatient and outpatient hospital. As a result, we include this CMS-64 amount in the hospital category.

3 Medicare premiums are not reported in MSIS. We distribute CMS-64 amounts proportionately across dually eligible enrollees in MSIS for each state.

4 Medicare coinsurance and deductibles are reported under individual service types throughout MSIS. We distribute the CMS-64 amount for QMBs across CMS-64 spending in the hospital, non-hospital acute, and institutional LTSS categories prior to calculating state-level adjustment factors, based on the distribution of Medicare cost sharing for hospital, Part B, and skilled nursing facility services among QMBs in 2009 Medicare data. See MedPAC and MACPAC, *Data book: Beneficiaries dually eligible for Medicare and Medicaid,* Table 4 (2013). http://www.macpac.gov/publications/Duals_DataBook_2013-12.pdf.

Sources: MACPAC analysis of Medicaid Statistical Information System (MSIS) data and CMS-64 Financial Management Report (FMR) net expenditure data.

Endnotes

[1] Medicaid and CHIP Payment and Access Commission (MACPAC), *Report to the Congress on Medicaid and CHIP,* March 2012 (Washington, DC: MACPAC, 2012): 87–89. http://www.macpac.gov/reports/.

[2] Table 16 is modeled after Table 1 in the March 2014 edition of MACStats (Medicaid and CHIP Payment and Access Commission (MACPAC), *Report to the Congress on Medicaid and CHIP,* March 2014 (Washington, DC: MACPAC, 2014): 75. http://www.macpac.gov/reports/). Table 1 of the March 2014 MACStats shows estimates for 2013 and is partly based on projections by the Office of the Actuary at the Centers for Medicare & Medicaid Services. To produce the age breaks used in Tables 16–19, however, numbers were calculated by MACPAC directly from the MSIS. FY 2011 is the latest year for which enrollment data are available in MSIS for all states.

[3] MACPAC has adjusted benefit spending from MSIS to match CMS-64 totals; see the discussion later in Section 5 for details.

[4] Because administrative data are grouped by month, the point-in-time number from administrative data generally appears under a few different titles—average monthly enrollment, full-year equivalent enrollment, or person-years. Average monthly enrollment takes the state-submitted monthly enrollment numbers and averages them over the 12-month period. It produces the same result as full-year equivalent enrollment or person-years, which is the sum of the monthly enrollment totals divided by 12.

[5] See, for example, Centers for Medicare & Medicaid Services (CMS), *Medicare & Medicaid statistical supplement, 2010 edition,* Brief summaries and glossary (Baltimore, MD: CMS, 2010). http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareMedicaidStatSupp/2010.html.

[6] States make capitated payments for all individuals enrolled in managed care plans, even if no health care services are used. Therefore, all managed care enrollees are currently counted as beneficiaries, regardless of whether or not they have any health service use.

[7] Some individuals who are counted as beneficiaries in CMS data for a particular fiscal year were not enrolled in Medicaid during that year; they are individuals who were enrolled and received services in a prior year, but for whom a lagged payment was made in the following year. These individuals are often reported as having an unknown basis of eligibility in CMS data.

[8] Medicaid benefit spending reported here excludes amounts for Medicaid-expansion CHIP enrollees, the territories, administrative activities, the Vaccines for Children program (which is authorized by the Medicaid statute but operates as a separate program), and offsetting collections from third-party liability, estate, and other recoveries.

[9] For a discussion of these data sources, see Medicaid and CHIP Payment and Access Commission (MACPAC), Improving Medicaid and CHIP data for policy analysis and program accountability, in *Report to the Congress on Medicaid and CHIP,* March 2011 (Washington, DC: MACPAC, 2011). http://www.macpac.gov/reports/MACPAC_March2011_web.pdf.

[10] Some of these amounts, including certain supplemental payments to hospitals and drug rebates, are lump sums that are not paid on a claim-by-claim basis for individual Medicaid enrollees. Nonetheless, we refer to these CMS-64 amounts as benefit spending, and the adjustment methodology described here distributes them across Medicaid enrollees with MSIS spending in the relevant service categories.

[11] Government Accountability Office (GAO), *Medicaid: Data sets provide inconsistent picture of expenditures* (Washington, DC: 2012). http://www.gao.gov/assets/650/649733.pdf; Administrative databases, in *Databases for estimating health insurance coverage for children: A workshop summary,* edited by T. Plewes (Washington, DC: The National Academies Press, 2010): 72. http://www.nap.edu/catalog/13024.html.

[12] The sum of adjusted MSIS benefit spending amounts for all service categories totals CMS-64 benefit spending, exclusive of offsetting collections from third-party liability, estate, and other recoveries. These collections, $7.4 billion in FY 2011 (excluding Maine and Tennessee), are not reported by type of service in the CMS-64 and are not reported at all in MSIS.

[13] See Centers for Medicare & Medicaid Services (CMS), *Medicaid disproportionate share hospital (DSH) payments.* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Medicaid-Disproportionate-Share-Hospital-DSH-Payments.html.

[14] Although the discussion in this section generally omits the term non-institutionalized for brevity, all estimates exclude individuals living in nursing homes and other institutional settings.

[15] Centers for Disease Control and Prevention (CDC), About the National Health Interview Survey (Atlanta, GA: CDC, 2012). http://www.cdc.gov/nchs/nhis/about_nhis.htm.

[16] The annual NHIS questionnaire consists of three major components—the Family Core, the Sample Adult Core, and the Sample Child Core. The Family Core collects information for all family members regarding household composition and socioeconomic and demographic characteristics, along with basic indicators of health status, activity limitation, and health insurance. The Sample Adult and Sample Child Cores obtain additional information on the health of one randomly selected adult and child in the family.

[17] Data were pooled to yield sufficiently large samples to produce reliable subgroup estimates and to increase the capacity to detect meaningful differences between subgroups and insurance categories.

[18] G. Kenney and V. Lynch, Monitoring children's health insurance coverage under CHIPRA using federal surveys, in *Databases for estimating health insurance coverage for children: A workshop summary,* edited by T. Plewes (Washington, DC: National Academies Press, 2010): 72. http://www.nap.edu/catalog/13024.html.

[19] M. McPherson, et al., A new definition of children with special health care needs, *Pediatrics* 102 (1998): 137–140.

[20] For children under age 18 to be determined disabled under SSI rules, the child must have a medically determinable physical or mental impairment(s) that causes marked and severe functional limitations and that can be expected to cause death or last at least 12 months (§1614(a)(3)(C)(i) of the Social Security Act). For additional discussion of disability as determined under the SSI program and its interaction with Medicaid eligibility, see Chapter 1 in MACPAC's March 2012 report to the Congress.

[21] The CSHCN Screener was developed by CAHMI and is currently used in the National Survey of Children with Special Health Care Needs, the Medical Expenditure Panel Survey, and other federal surveys. For more information on the CSHCN Screener, see C.D. Bethell, D. Read, R.E. Stein, et al., Identifying children with special health care needs: Development and evaluation of a short screening instrument, *Ambulatory Pediatrics* 2 (2002): 38–48.

[22] Child and Adolescent Health Measurement Initiative (CAHMI), *Approaches to identifying children and adults with special health care needs: A resource manual for state Medicaid agencies and managed care organizations* (Baltimore, MD: Centers for Medicare and Medicaid Services, 2002).

[23] Children who are receiving SSI should meet the criteria for being a CSHCN; however, some do not. While we do not have enough information to assess the reasons that children who are reported to have SSI did not meet the criteria for CSHCN, it could be because: (1) the parent erroneously reported in the survey that the child received SSI, or (2) the NHIS condition list did not capture, or the parent did not recognize, any of the NHIS conditions as reflecting the child's health circumstances.

[24] Child and Adolescent Health Measurement Initiative (CAHMI), *Identifying children with chronic conditions and elevated service use or need (CCCESUN) in the National Health Interview Survey (NHIS)* (Portland, OR: Oregon Health and Science University, 2012); Davidoff, A.J., Identifying children with special health care needs in the National Health Interview Survey: A new resource for policy analysis, Health Services Research 39 (2004): 53–71.

[25] The CAHMI algorithm differs from the CSHCN Screener in three main respects (CAHMI 2012—see endnote 24 for source). First, the CSHCN Screener uses a non-condition specific approach, which identifies a broader range of children with chronic childhood conditions who have special needs. The CAHMI algorithm limits CSHCN to children identified by parents as having a specific diagnosis in a condition set collected in the NHIS. Second, the CSHCN Screener captures children with above routine use of medical and health services that is the result of an ongoing condition, based on brief follow-up questions. The NHIS does not include the duration of conditions or identify elevated service use or need directly related to each condition. Thus, the CAHMI algorithm collects data on elevated service use and need independent from the condition set. Third, the CAHMI algorithm identifies a small number of additional children as having elevated need when parents report an unmet need due to cost through one of three survey items. As a result of these differences, the children identified from the CAHMI algorithm in the NHIS are not equivalent in health and function characteristics to children identified by the CSHCN Screener in other surveys. The CAHMI criteria differ from criteria developed by Davidoff (2004—see endnote 24 for source) in that Davidoff does not recognize unmet need due to cost as part of the definition of elevated need.

[26] The algorithm in this analysis begins with the NHIS conditions referred to as the limited condition set by CAHMI (2012—see endnote 24 for source), then excludes seven conditions that were dropped in the 2011 NHIS (depression, learning disability, cancer, neurological problem, phobia or fears, gum disease, lung or breathing problem). To capture CSHCN potentially lost from this change and other children with a broader range of chronic conditions, affirmative responses to three other survey items were treated as qualifying conditions (has difficulties with emotions/concentration/behavior or getting along in last four weeks, has chronic condition that limits activity, and fair or poor health). These items were also added to better align the CSHCN definition with the 18-year-olds, whom the NHIS treats as adults. The NHIS Sample Adult Core contains slightly different condition items. In order to align the CSHCN definitions more closely, the condition set for 18-year-olds was expanded to add mental retardation or developmental problems that cause difficulty with activity, cancer, symptoms of depression in the past 30 days, fair or poor health, and any unspecified condition that causes functional limitation and is chronic. In the MACPAC analysis, two or more emergency department visits reported in the last 12 months was added as another measure of elevated service use.

[27] Centers for Medicare & Medicaid Services (CMS), *Medicaid managed care enrollment report* (Baltimore, MD: CMS). http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Medicaid-Managed-Care/Medicaid-Managed-Care-Enrollment-Report.html.

[28] Centers for Medicare & Medicaid Services (CMS), *National summary of state Medicaid managed care programs as of July 1, 2011* (Baltimore, MD: CMS). http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Medicaid-Managed-Care/State-Program-Descriptions.html.

[29] For enrollees with no paid claims during a given period (e.g., fiscal year), their MSIS data are limited to person-level information (e.g., basis of eligibility, age, sex, etc.).

[30] We generally exclude Medicaid-expansion CHIP children from Medicaid analyses because their funding stream (CHIP, under Title XXI of the Social Security Act) differs from that of other Medicaid enrollees (Medicaid, under Title XIX). In addition, spending (and often enrollment) for the Medicaid-expansion CHIP population is reported by CMS in CHIP statistics, along with information on separate CHIP enrollees.

[31] See Centers for Medicare & Medicaid Services (CMS), *MSIS state data characteristics/anomalies report,* January 7, 2013 (Baltimore, MD: CMS, 2013). http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/downloads/anomalies1.pdf.